

WHAT IS CLAIMED IS:

1. A method for delivering a closure element to seal an opening through tissue, the closure element being carried on a proximal end of an elongate member such that a proximal end of the closure element is spaced apart from an outer surface of the elongate member, the method

5 comprising:

inserting the distal end of the elongate member into an opening through tissue;

inserting a distal end of an actuator member between the proximal end of the closure element and the outer surface of the elongate member until the distal end of the actuator member is coupled with the closure element;

10 advancing the actuator member distally, thereby advancing the closure element towards the distal end of the elongate member;

engaging tissue adjacent the distal end of the elongate member with tissue engaging elements on the closure element; and

15 withdrawing the elongate member from the opening, thereby leaving the closure element to close the opening.

2. The method of claim 1, wherein the elongate member comprises a skin overlying at least a portion of the outer surface between the closure element and the distal end of the elongate member and at least partially overlying the closure element, and wherein the skin separates from the outer surface of the elongate member as the closure element is advanced

20 towards the distal end.

3. The method of claim 2, wherein the skin comprises a weakened region extending towards the distal end of the elongate member, the weakened region tearing as the carrier assembly is advanced towards the distal end of the elongate member.

4. The method of claim 2, wherein the skin comprises a flap extending generally axially along the outer surface of the elongate member and overlying an adjacent region of the skin, and wherein the flap is released from the adjacent region as the carrier assembly is advanced towards the distal end of the elongate member, thereby allowing the skin to separate from the outer surface.

5. The method of claim 2, wherein the skin expands to a cross-section that is larger than a cross-section of the elongate member as the carrier assembly is advanced towards the distal end.

6. The method of claim 2, wherein the skin is bonded to the outer surface of the elongate member by an adhesive, and wherein the adhesive has sufficient adhesive strength such that the skin is peeled away from the outer surface as the carrier assembly is advanced towards the distal end.

7. The method of claim 2, wherein the skin comprises an outer surface that is substantially slippery for facilitating advancement of the elongate member into the opening through tissue.

8. The method of claim 2, wherein the opening through tissue extends through one or more layers of fascia, and wherein the skin facilitates advancing the closure element through the one or more layers of fascia.

9. The method of claim 1, wherein the opening through tissue communicates with a blood vessel, and wherein the deploying step comprises substantially sealing the opening from blood flow therethrough with the closure element.

10. The method of claim 9, wherein the elongate member comprises a lumen
5 extending between the proximal and distal ends, and wherein the method further comprises inserting one or more instruments through the lumen into the blood vessel.

11. A method for delivering a closure element to seal an opening through tissue over an elongate member comprising a hub on its proximal end, the method comprising:

inserting a distal end of the elongate member into an opening through tissue;

10 inserting a distal end of an actuator member between the hub and the elongate member, the distal end of the actuator member carrying a closure element;

advancing the actuator member distally, thereby advancing the closure element towards the distal end of the elongate member;

engaging tissue adjacent the distal end of the elongate member with tissue engaging
15 elements on the closure element; and

withdrawing the elongate member from the opening, thereby leaving the closure element to close the opening.

12. The method of claim 11, further comprising deploying the closure element from the distal end of the actuator member before withdrawing the elongate member.

13. The method of claim 12, wherein the closure element is deployed from the actuator element by advancing a pusher member relative to the actuator member to push the closure element off of the distal end of the actuator member.